

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Gates Manufacturing

North Dakota Manufacturing Extension Partnership

Lean and Teamwork Provide Gateway to Efficiency

Client Profile:

Gates Manufacturing (Gates) was founded by Michael and Pat Gates in the early 1970's as an OEM harrow tine manufacturer, general metal fabricator, and repair contractor in and for the local rural farming region near Lansford, North Dakota. Gates pioneered the heavy harrow industry with the first solid mounted harrow drawbar in 1990 and now manufactures a full line of residue management equipment that meets the ever changing needs and trends of modern agriculture. In 1999, Gates Manufacturing was recognized as the "Small Business Exporter of the Year" by the U.S. Small Business Administration and the "North Dakota Global Enterprise of the Year" by the North Dakota District Export Council. The company employs 14 people.

Situation:

Gates Manufacturing employees had attended a Lean manufacturing workshop, so when manufacturing problems of lead time, cost estimating, and plant layout arose, Gates contracted with the North Dakota Manufacturing Extension Partnership (Dakota MEP), a NIST MEP network affiliate, to help them implement Lean manufacturing principles.

Solution:

Dakota MEP involved everyone at Gates in the improvement process by using teamwork and Lean manufacturing principles. The first order of business was to coordinate work flow to run more smoothly and efficiently. Production meetings, previously held once a week, were changed to take place daily and last just 10 minutes. In order for everyone to have access to the most up-to-date information, an erasable display board was erected to post production schedules for everyone to see. Employees began posting work orders and start assignments describing each project, identifying essential parts/components, detailing work assignments, and projecting the estimated time of completion. This has enabled Gates to finish projects in a systematic, organized way and more effectively estimate time and cost.

Dakota MEP completed method studies to determine how the number of steps an employee took between machines and supplies factored into material and time costs. Simply moving equipment in line with the product flow created a layout more conducive to efficient manufacturing strategies and reduced the number of steps each employee took. Moving most storage indoors reduced steps as well as reducing dust access to the paint area. To keep up with equipment maintenance, an employee was assigned to be in charge of it and oversee regular updates (whether he does it himself or assigns someone to do it). This has helped Gates stay ahead of the game on repairing and sustaining machinery.

Results:

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- * Increased sales by 7.7 percent in one year.
- * Increased net income by 76.9 percent.
- * Reduced lead time by 50 percent.
- * Created new plant layout, saving steps equivalent to 30 hours per week and \$70,000 annually.

Testimonial:

"MEP's training and assistance in Lean manufacturing principles has produced noticeable, positive results in our company. We have reduced our lead time by 50 percent on several products. We often ship mounted units the same day they are ordered. Whereas workflow was previously problematic for us, we are now improving efficiency on all product lines through the help of Dakota MEP."

Mike Gates, President